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## Remarks

### *Status of the Application*

Claims 1-4, 8-10, 37, 54, 58, and 59 are pending in the application.

Claims 1 and 54 are amended to include the limitations of Claims 6 and 7. Claim 37 is amended to include the limitations of Claim 38. Claims 5-7, 15, 38, and 48 are canceled.

New Claim 58 is added to recite that the composition has a pH greater than about 3, as previously presented.

New Claim 59 is added to recite a dispersion of polydioxythiophene and a colloid-forming polymeric acid in water. Support for this can be found throughout the specification, for example, at page 9, the paragraph beginning on line 9, at page 10, the paragraph beginning on line 2, and the examples.

The pending claims are provisionally rejected under nonstatutory obviousness-type double patenting as being unpatentable over five co-pending applications. The pending claims also stand rejected under 35 U.S.C. § 102 or, in the alternative, under 35 U.S.C. § 103.

Claims 1, 37, 54, and 59 are the independent claims. The dependent claims depend from and further limit their respective independent claims, and thus patentably define over the references as well.

No new matter has been introduced by the foregoing claim amendments or the addition of new claims.

### *Claim Rejections – Nonstatutory Obviousness-Type Double Patenting*

As noted in the Office Action, these rejections are provisional since the references are all copending applications. A terminal disclaimer addressing these rejections accompanies this paper.

### *Claim Rejections – 35 U.S.C. § 102 or, in the Alternative, 35 U.S.C. § 103*

EP '111

The scope of the amended claims is within that of the previous amendments. Accordingly, Applicants' previously filed remarks are equally pertinent here. Applicants restate their previous remarks and incorporate those remarks by reference to avoid the necessity of restating the full text in this paper.

EP '111 discloses an antistatic layer coating composition containing a polythiophene (PEDT) with a conjugated polymer backbone in the presence of a polymeric polyanion

compound. The polymeric polyanion can be a polymeric acid in free acid or neutralized form (page 5, lines 3-11). However, EP '111 does not teach or suggest fluorinated polymeric sulfonic acids. The only polymeric acid exemplified is polystyrene sulfonic acid (PSSA), which is not fluorinated and not colloid-forming.

Applicants respectfully submit that if the independent claims (1, 37, 54, and 59) are patentable as novel and non-obvious over EP '111, as Applicants believe they are, then the dependent claims are novel and non-obvious as they narrow, and further patentably distinguish, over the reference. Applicants would draw attention to Example 21, pages 41 and 42 of the present specification, for comparative data on the degradation of OLED devices using PEDT/PSSA buffer once the pH is increased much above 2.5. Accordingly, the major differences between the claimed compositions and EP '111 relate to (i) differences in chemical composition, (ii) the use of a colloid-forming acid in the claims and a polyanion in the reference that does not form a colloid, and (iii) differences in behavior in OLEDs at pH above about 2.5. Moreover, EP '111 does not teach the use of its antistatic coating within a pH range, but teaches its use as either acid or neutral (please see EP '111, page 4 line 56 to page 5, line 2, and page 5, lines 20-23):

> It has been established experimentally that the presence of residual persulfate is undesirable when optically clear antistatic layers have to be formed and that the adhesion in wet state to hydrophobic resin supports is impaired thereby. Therefore, following the polymerization process a desalting step is introduced. For example, by known procedures such as dialysis, electrodialysis, ultrafiltration or treatment with basic or acidic ion exchange resins the persulfate and particularly potassium persulfate is removed.

and

> Instead of the free polymeric polyacids applied in conjunction with the polythiophenes it is possible to use mixtures of alkali salts of said polyacids and non-neutralized polyacids, optionally in the presence of monoacids. Free acid groups of the polyanionic polymer may be allowed to react with an inorganic base, e.g. with sodium hydroxide, to obtain a neutral polymer dispersion before coating.

These extracts from the reference show that (i) if a clear antistatic coating is desired, a desalting step may be necessary to achieve clarity, and (ii) if a neutral (rather than acidic) coating is desired for superior coatability, then salts of the acids or non-neutralized acids may be used to elevate the pH to neutral.

There isn't anything taught or suggested in EP '111 to motivate one skilled in the art to modify the reference in any way to arrive at Applicants' claimed buffer compositions for

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OLEDs. Accordingly, Applicants respectfully request that these alternative rejections be withdrawn.

Pickup, et al.

Pickup identifies PEDOT/PSS and PEDOT/Nafion® as having utility in supercapacitors or as fuel cell catalyst supports (page 24, § 3.3 and page 25, § 3.4). However, the materials in Pickup are powders, and are identified as such in the reference (page 23, § 3.1, first paragraph). The powders so identified appear to precipitate during polymerization. The powder composite also retains $Fe(NO_3)_3$ due to the presence of $Fe^{3+}$, which would be detrimental to the performance of the claimed composition in an OLED (it would coagulate and destabilize the Nafion® and might inhibit desired conductivity). There is no teaching or suggestion of stable aqueous dispersions of a polydioxythiophene and at least one colloid-forming fluorinated polymeric sulfonic acid. The present claims therefore recite elements not disclosed in Pickup.

Futhermore, the examples with Nafion® are in solvent/water mixtures and not in water alone, as recited in newly added Claim 59.

Accordingly Applicants respectfully submit that this rejection be withdrawn.

**Conclusion**

For all of the foregoing reasons, Applicants respectfully submit that the rejections have been rendered moot or overcome by the foregoing amendments and remarks, and that the pending claims are in condition for allowance. A notice of allowance is earnestly solicited.

Should the Examiner have questions about the content of this paper or the status of the application, he is invited to call the undersigned at the telephone number listed below.

Respectfully submitted,

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Dated: March 5, 2007

Docket No. PE0688USNA

**Terminal Disclaimer to Obviate a Provisional Double Patenting Rejection Over a Pending "Reference" Application**

In re Application of: **Che-Hsiung Hsu et al.**

Application No. **10/669,494**

Filed: **September 24, 2003**

For: **Water Dispersible Polythiophenes Made with Polymeric Acid Colloids**

**CONTINUATION SHEET**

| Co-Pending Application No. | Filed |
|---|---|
| 11/165,158 | 06-23-2005 |
| 10/802,704 | 03-17-2004 |
| 10/814,917 | 03-31-2004 |
| 10/803,114 | 03-17-2004 |
| 10/802,138 | 03-17-2004 |